

SOV/132-50-1-10/17

The Geological-Engineering Districting of Regions of Mineral Deposits According to the Results of Geological-Prospecting Works.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut gidrogeologii i inzhenernoy geologii. (The All-Union Scientific Research Institute of Hydro-Geology and Geological-Engineering, "VSGEINISD").

Card 3/3

L 38222-66 ENT(d)/ENT(m)/EWP(k)/EWP(w)/EWP(v) IJP(c) EM/WW
 ACC NR: AP6011783 SOURCE CODE: UR/0147/66/000/001/0038/0046

AUTHOR: Samoylov, Ye. A.; Pavlov, B. S.

44
 6

ORG: none

TITLE: Vibration of a liquid-filled spherical shell 1 1
 2 6

SOURCE: IVUZ. Aviatsionnaya tekhnika, no. 1, 1966, 38-46

TOPIC TAGS: vibration, spheric shell structure, centrifugal force, oscillograph, resonance phenomenon, vibration theory

ABSTRACT: The authors study axisymmetric vibrations of a spherical shell for two general cases: 1. when the lower and upper hemispheres are of the same thickness; 2. when the upper and lower hemisphere thicknesses are different. A spherical shell is assumed to be composed of two hemispheres. The hemispheres are fixed in a diametric plane away from centrifugal forces and unrestricted with respect to normal motion. It is assumed that each hemisphere can move stepwise in any direction along the normal. This model may be used within the framework of momentless theory to describe antisymmetric vibrations with respect to the given plane. A liquid filled sphere was fastened to a vibration stand by means of a socket. Eight transducers were attached to the shell to determine vibration amplitude. The signals were then amplified and recorded by a loop oscillograph. In addition to this, the amplitude was measured by a

Card 1/2

UDC: 534.014.2

I. 38222-66

ACC NR: AP6011783

vibration pickup in the form of a thin plate with transducers. The plate was then fastened to a fixed support. These signals were also amplified and recorded by a loop oscillograph. Natural frequencies and configurations were determined by a resonance method. The calculations are in agreement with experimental data. Orig. art. has: 4 figures, 2 tables, 43 formulas.

SUB CODE: 20/ SUBM DATE: 26Jul65/ ORIG REF: 002/ OTH REF: 001

Card 2/2

SAMOYLOV, Ye.A.; PAVLOV, B.S.

Vibrations of a semiapherical shell filled with a liquid.

Izv. vys. ucheb. zav.; av. tekhn. 7 no.3:79-86 '64.

(MIRA 17:9)

ACC NR: AP7002651 (A,N) SOURCE CODE: UR/0413/66/000/023/0208/0208
INVENTOR: Mal'tsev, O. P.; Pavlov, B. S.
ORG: None
TITLE: Working model to simulate motion of an artificial earth satellite. Class 42, No. 147845
SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 23, 1966, 208
TOPIC TAGS: model, artificial earth satellite, astronomy, satellite motion
ABSTRACT: This Author's Certificate introduces: 1. A working model which simulates motion of an artificial earth satellite. The unit contains a globe and a model of the satellite on a bracket rotated by individual electric drives. The model has a replaceable template with a guide slot to simulate an elliptical orbit and rotation of the major semiaxis in the orbital plane. This template is fastened to the gear in the speed reducer of the satellite drive which is coaxial with the output half-axle of the speed reducer. The model is also furnished with a cantilever extension of the satellite bracket with a pin which moves in the slot of the template for reciprocating motion of the bracket simultaneously with its rotation. 2. A modification of this model in which the rate of motion of the satellite is varied at perigee and apogee to conform with Kepler's law of constant sectoral velocity. A variable resistor is mounted on the cantilever extension and connected to a control circuit with the sliding contact coupled to the output half-axle of the speed reducer.
SUB CODE: 2203/ SUBM DATE: 05Sep61
Card 1/1 UDC: 523.4(086.5)

MARTYNNENKO, Konstantin Dmitriyevich; KEYL', I.A., ~~retsensent~~;
~~PAVLOV, B.T., retsensent~~; MEL'NIKOV, N.P., red.;
SARATSKAYA, G.I., red. izd-va; VDOVINA, V.M., tekhn. red.

[Processes, apparatus, and equipment for wood hydrolysis and
the manufacture of wood chemicals] Protsessy, apparaty i obo-
rudovanie gidroliznogo i lesokhimicheskogo proizvodstv. Moskva,
Goslesbumizdat, 1961. 444 p. (MIRA 15:5)
(Wood—Chemistry)

KRUPIN, G.V.; BELYAYEV, I.T.; LAPSHIN, A.A.; GORDEYEV, N.I.; MAR'YANOVSKIY, I.M.; PAVLOV, B.V.; ZHILOV, S.N.; TSYPKIN, S.I.; ANDREYEV, N.H.; KAZIMIROVA, V.P.; KURANOVA, I.L.; FIGULEVSKIY, G.V.

Annotations of the scientific research work performed at the institute in 1957. Trudy LTIKHP 15:213-227 '58.
(MIRA 13:4)

1. Leningradskiy tekhnologicheskoy institut kholodil'noy promyshlennosti.
 2. Kafedra tekhnologicheskogo oborudovaniya pishchevykh proizvodstv (for Krupin, Lapshin, Pavlov).
 3. Kafedra ekonomiki i organizatsii proizvodstva (for Belyayev).
 4. Kafedra detaley mashin i pod'yemno-transportnykh mashin (for Gordeyev).
 5. Kafedra grafiki (for Mar'yanovskiy).
 6. Kafedra promyshlannoy teplotekhniki (for Zhilov).
 7. Kafedra fiziki (for TSypkin).
 8. Kafedra fizicheskoy kolloidnoy i organicheskoy khimii (for Andreyev, Kazimirova, Kuranova, Pigulevskiy).
- (Refrigeration and refrigerating machinery)
(Chemistry, Technical)

IVANOV, Valeriy Vasil'yevich; PAVLOV, B.V., inzh., red.; FREGER, D.P.,
red. izd-va; BELOGUROVA, I.A., tekhn. red.

[Selection of balancing equipment] Vybór oborudovaniia dlia
balansirovki; obzor. Pod red. B.V.Pavlova. Leningrad,
Leningradskii dom nauchno-tekhn. propagandy, 1963. 62 p.
(MIRA 16:6)

(Balancing of machinery—Equipment and supplies)

PAVLOV, Boris Vasil'yevich; MORZHAKOV, S.P., kand. tekhn.nauk,
retsensent; SOLOV'YEV, M.V., kand. tekhn.nauk, red.;
CHFAS, M.A., red.izd-vq; PETERSON, M.M., tekhn. red.

[Vertical balancing machines] Vertikal'nye balansirovochnye
stanki. Moskva, Mashgiz, 1963. 100 p. (MIRA 16:4)
(Balancing of machinery)

PAVLOV, B.V.

Dynamic balancing of separator drums. Izv. vys.ucheb. zav.;
pishch. tekhn. no. 2:120-124 '58. (MIRA 11:10)

1. Leningradskiy tekhnologicheskoy institut kholodil'noy promyshlennosti, Kafedra tekhnologicheskogo oborudovaniya pishchevykh proizvodstv.

(Centrifuges)
(Balancing of machinery)

BOLOTINA, O.P.; PAVLOV, B.V.; ZEMLYANAYA, A.F.

Trace conditioned reflexes in lower monkeys. Zhur. vys.
nerv. delat 13 no.6:1032-1038 N-D '63. (MIRA 12:1)

1. Laboratoriya sravnitel'noy fiziologii vysshey nervnoy
deyatel'nosti Instituta fiziologii imeni Pavlova AN SSSR.

PAVLOV, B.V., inzh.

Some physical parameters of diesel fuels. Trakt. 1 sel'khozmasb.
no.12:13-14 D '59. (MIRA 13:3)

1.Vsesoyuznyy nauchno-issledovatel'skiy institut mekhanizatsii
sel'skogo khozyaystva.
(Diesel fuels)

PAVLOV B. V. inzh.

Using electronic calculating machines for analyzing the process of
fuel injection. Mekh. i elekt. ots. sel'shoz. 17 no. 4:17-20 '58.

(MI 17:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut mekhanizatsii sel'-
skogo khozyaystva.

(Diesel engines)

(Tractors--Fuel systems)

PAVLOV, B. V., Cand Tech Sci -- (diss) "Development of methods of testing fuel devices of tractor motors." Moscow, 1960. 20 pp; (All-Union Order of Lenin Academy of Agricultural Sciences im V. I. Lenin, All-Union Scientific Research Inst of the Mechanization of Agriculture, VIM); number of copies not given; price not given; (KL, 17-60, 157)

PAVLOV, Boris Vasil'yevich, kand. tekhn. nauk; KALISH, G.G., doktor
tekhn. nauk, retsenzent; MODEL', B.I., tekhn. red.

[Use of electronic calculating machines for studying the
fuel systems of diesel engines] Ispol'zovanie elektronnykh
vychislitel'nykh mashin dlia issledovaniia toplivnykh
sistem dizelei. Moskva, Mashgiz, 1962. 99 p. (MIRA 15:2)
(Diesel engines--Fuel systems)
(Electronic calculating machines)

ACC NRI AF6036786

(N)

SOURCE CODE: UR/0363/66/002/011/1966/1969

AUTHOR: Loshakova, G. V.; Plechko, R. L.; Vaypolin, A. A.; Pavlov, B. V.; Valov, Yu. V.; Goryunova, N. A.

ORG: Physicotechnical Institute im. A. F. Ioffe, AN SSSR (Fiziko-tehnicheskiy institut AN SSSR); Kiev Pedagogic Institute (Kievskiy pedagogicheskiy institut)

TITLE: Production and some properties of the semiconductor compounds ZnSnP_2 and CdSnP_2

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 2, no. 11, 1966, 1966-1969

TOPIC TAGS: zinc containing alloy, tin containing alloy, cadmium containing alloy, phosphorus containing alloy, semiconductor alloy

ABSTRACT: Previous attempts to obtain ZnSnP_2 from a mixture of components taken in stoichiometric ratio yielded a product containing a mixture of phases, including the ternary compound ZnSnP_2 , but also zinc and tin phosphides. The present article describes a method for producing single phase ZnSnP_2 by crystallization from a dilute solution in tin. The initial weighed portion consisted of zinc, tin, and phosphorus, in which the tin was taken in large excess over the stoichiometric amount. After heating to a temperature of 870°C and slow cooling in an evacuated quartz ampoule, the

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UDC: 537.311.33

ACC NR: AP6036786

ZnSnP_2 was separated from the tin. The remaining thin film of tin on the ZnSnP_2 crystals was dissolved in concentrated nitric acid. The crystals of ZnSnP_2 were a dark gray color, and were 3 x 1, 5 x 0.5 mm in size. Analogous experiments with CdSnP_2 showed that it could be produced from a dilute solution in cadmium. X ray analysis of the compounds obtained made it possible to determine the type of crystal structure, the lattice constants, and the microhardness; these values are listed in tabular form. It was shown also that ZnSnP_2 has a considerable amount of chemical resistance to a number of mineral acids, including nitric, hydrochloric, sulfuric, and hydrofluoric, while CdSnP_2 has very little resistance to these acids. Orig. art. has: 1 figure and 2 tables.

SUB CODE: 11, 20/ SUBM DATE: 23Dec65/ ORIG REF: 001/ OTH REF: 002

Card 2/2

ACC NR: AP6026121

Monograph

UR/

Pavlov, Boris Vasil'yevich

Cybernetic methods of technical diagnosis (Kiberneticheskiye metody tekhnicheskogo diagnoza) Moscow, Izd-vo "Mashinostroyeniye", 1966. 149 p. illus., biblio. 5,000 copies printed.

TOPIC TAGS: cybernetics, ^{mechanical} engineering ~~diagnosis~~, acoustic diagnosis, ~~engineering diagnosis theory~~, ~~engineering diagnostic methods~~, quality control, reliability ^{engineering}

PURPOSE AND COVERAGE: This book is intended for mechanical engineers concerned with the reliability of machines. The author discusses the general theory and methods of engineering diagnosis and the principle of designing cybernetic devices for determining the condition of machines without dismantling them. These methods and instruments may be used in the quality control of manufactured machinery in determination of the maintenance and repair procedures during the operation period, and also in conducting scientific investigations. There are 38 references, 33 of which are in Russian.

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UDC: 514.95:658.562

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SUB CODE: 14,06,13,20/ SUBM DATE: 30Jul65/ ORIG REF: 031/ OTH REF: 007

Card 3/3

PAVLOV, B.V., kand.tekhn.nauk

Technological diagnosis. Trakt. i sel'khoz mash. no.11:20-23 N
(MIRA 18:1)

1. Sibirskiy filial Vsesoyuznogo nauchno-issledovatel'skogo
instituta mekhanizatsii sel'skogo khozyaystva.

L 50231-65 EPA/EPF(c)/EPR/ENT(m)/ENP(j)/EWA(c)/T Pc-4/Pr-4/PB-4/Pt-7/
P1-4 RPL WW/BW/JW/WE/RM

ACCESSION NR: AP5015429

UR/0020/65/162/004/0873/0874

AUTHOR: Pavlov, B. V.

TITLE: The upper limit of self-ignition in a nonbranching chain reaction

SOURCE: AN SSSR. Doklady, v. 162, no. 4, 1965, 873-874

TOPIC TAGS: combustion, ignition, reaction kinetics, propulsion, ignition limit, chain reaction

ABSTRACT: Since according to Frank-Kamenetskiy's theory of thermal explosion the conditions for self-ignition of a homogeneous gas mixture can only improve with increasing pressure, it appears that the existence of an upper limit of self-ignition must be due to a chain reaction mechanism. The conditions of ignition by a nonbranching chain reaction were analyzed by formulating and solving expressions for the radical concentration and temperature profile in a spherical vessel and the radical concentration at the wall. The following criterion for self-ignition was derived:

$$w_{r,0} \frac{E}{RT_0^2} > \frac{\mu_0^2 \lambda}{4 p^2}$$

where $w_{r,0}$ = the reaction rate close to the wall, E = activation energy, T_0 = temper-

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ACCESSION NR: AP5015429

ature of the wall, μ_1 = first root of a Bessel function, λ = thermal conductivity, ρ = thickness of the reaction layer, q = heat of reaction, and R = gas constant. Since $\rho \sim p^{-3/2}$, the reaction layer thickness decreases with increasing pressure, and the expression on the right side of the criterion increases until both expressions are equal and ignition does not take place. This mechanism is the physical basis for the upper ignition limit. Orig. art. has: 10 formulas. [PV]

ASSOCIATION: Institut khimicheskoy fiziki Akademii nauk SSSR (Institute of Chemical Physics, Academy of Sciences, SSSR)

SUBMITTED: 2 Nov 64

ENCL: 00

SUB CODE: FP

NO REF SOV: 002

OTHER: 000

ATD PRESS: 4016

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807/5035

Vitreous State (Cont.)

Chemical Properties of Glasses

- Dobrow, S.F. Chemical Properties of Glasses 418
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 action of Electrolyte Glasses With Solutions by Means of the Indicator
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Vitreous State (Cont.)

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Semiconductor Glasses

- Kolomiets, R.F. Semiconductor Glasses 449
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 Kolomiets, R.F., R.A. Goryunov, and V.P. Gillo. Vitreous State in
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Vitreous State (Cont.)

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Soda Porcellaine Glasses

- Dobrow, S.F. Control of the Properties of Soda Porcellaine Glasses 480
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 Abramov, A.V. Optical Constants and Vitrification of Soda Porcellaine Glasses 488
 Card 20/22

Case 5:18-cv-01001

(5)

PAVLOV, B. V.

S/161/60/002/04/14/034
81955
B002/B063

24.3900
AUTHORS:

Kolomiets, B. T., Pavlov, B. V.

TITLE:

Vitreous Semiconductors VIII. The Optical Properties of
Thallium, Arsenous, and Antimonious Chalcogenide Glasses 16

PERIODICAL: Fizika tverdogo tela, 1960, Vol. 2, No. 4, pp 637-643

TEXT: The systems (Tl - As - Sb) - (S - Se - Te) form semiconductive glasses in a wide range (Fig. 1). These glasses can be penetrated by infrared light up to about 60 to 80%. In this paper, absorption spectra of 35 binary and two quaternary glasses are studied between ~ 1 and 18μ . The samples were prepared by fusion or pressing. Absorption depends, to some extent, on the mode of preparation method, as was shown by tests performed with As_2S_3 (Fig. 2). The following systems were studied (some of the absorption curves are depicted): As_2S_3 - As_2Se_3 , five compounds (Fig. 3); As_2Se_3 - As_2Te_3 , ten compounds (Fig. 4); As_2Se_3 - Tl_2Se , two compounds (Fig. 4); As_2Se_3 - Sb_2Se_3 , three compounds (Fig. 4); As_2S_3 - As_2Te_3 , two compounds (Fig. 6); As_2S_3 - Tl_2S , two compounds (Fig. 6); As_2S_3 - Sb_2S_3 , two compounds

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S/051/62/012/002/015/020
E202/E192

AUTHORS: Bashko, A., Prokopova, G., Kolomiyets, B.T.,
Pavlov, B.V., and Shilo, V.P.

TITLE: Absorption spectra of glasses of the As_2S_3 - As_2Se_3
system

PERIODICAL: Optika i spektroskopiya, v.12, no.2, 1962, 275-277

TEXT: The purpose of this work was to extend the study of
the absorption spectra of the above system to the region of 25 μ ,
so as to determine the wavelengths of all the absorption bands.
The glasses were compounded according to the method given
previously (Ref.4: B.T. Kolomiyets, N.A. Goryunova, ZhTF, 25,
1955, 984; B.T. Kolomiyets, N.A. Goryunova, V.P. Shilo, Tr. III
Vsesoyuzn. soveshch. po stekloobrazn. sost. (Proceedings of the
3rd Conference on vitreous state) L., 1959). The following were
prepared: As_2S_3 ; $5As_2S_3 \cdot As_2Se_3$; $2As_2S_3 \cdot As_2Se_3$; $As_2S_3 \cdot As_2Se_3$;
 $As_2S_3 \cdot 2As_2Se_3$; $As_2S_3 \cdot 5As_2Se_3$; As_2Se_3 . Disc-shaped samples
20 mm in diameter and 0.15-3.0 mm thick were cut out, ground and
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Absorption spectra of glasses of ... S/051/62/012/002/015/020
E202/E192

polished. Transmission spectra were measured on spectrophotometers $\text{C}\Phi$ -4 (SF-4) (0.5-1.2 μ); VKC-14 (IKS-14) (0.8-18.0 μ); and Zeiss UR-10 (2-25 μ). In the region of 1-18 μ , the authors found certain discrepancies between their data for the absolute transmittivity and the position and depth of the strongest absorption bands, and those given in previous papers (Refs. 1 and 2: Proc. of the 3rd Conference on vitreous state, L., 1959). In the long wavelength region all the glasses had their absorption bands beyond $\lambda = 25 \mu$, and hence could not be determined accurately. Optical absorption curves for As_2S_3 ; $\text{As}_2\text{S}_3 \cdot \text{As}_2\text{Se}_3$; and As_2Se_3 were given. Some of the absorption bands were attributed to traces of As_2O_3 , and others to the so far unidentified contaminants. There are 2 figures and 2 tables.

SUBMITTED: February 11, 1961

Card 2/2

GOLUBEV, A.I.; PAVLOV, B.V., inzh., retsenzent; KARGANOV, V.G.,
inzh., red.; MAKAROVA, L.A., tekhn. red.

[Modern seals for rotating shafts] Sovremennye uplotne-
niia vrashchaiushchikhsia valov. Moskva, Mashgiz, 1963.
214 p. (MIRA 17:2)

PAVLOV, B.V., kand. tekhn. nauk; LAZOVSKIY V.V., inzh.

Analyzing the operational reliability of tractors and agricultural machines. Mekh. i elek. sots. sel'khoz. 21 no.5:16-19 '63.

(MIRA 17:1)

1. Sibirskiy filial Vsesoyuznogo nauchno-issledovatel'skogo instituta mekhanizatsii sel'skogo khozyaystva.

PAVLOV B.V.

• USSR/Kinetics - Combustion. Explosions. Topochemistry. Catalysis. B-9

Abs Jour : Referat Zhur - Khimiya, No 6, 1957, 18559

Author : P.S. Shantarovich, B.V. Pavlov.
Title : Dissociation Mechanism of Methane.

Orig Pub : Zh. fiz. khimii, 1956, 30, No 4, 811-820

Abstract : The kinetics of the thermal homogeneous dissociation of CH_4 at 850 to 1000° was studied. In the transformation depth was not great (up to 3%), the dissociation proceeds according to the law: $w = k/\text{CH}_4^{1/2}$, where $k = 4.28 \times 10^{12} \exp(-35000/RT) \text{ sec}^{-1}$. In case of great transformation depths, self-braking is observed, which is caused by the inhibiting influence of H_2 forming at the dissociation. The authors propose and analyse the chain scheme of CH_4 dissociation in detail. It is shown that the found effective energy of the activation of the gross process is the actual activation energy of the reaction $\text{CH}_3 \rightarrow \text{CH}_2 + \text{H}$ as a limiting stage of the chain dissociation.

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Butler, BV

Some characteristics of the discharge in the mixture of mercury and neon. G. M. Melyshev and B. V. Pavlov. *Vysok. Leningrad. Univ. 12, No. 16, Ser. Fiz. i Khim. No. 3, 32-40 (1957).*—Elec. and optical characteristics of d.-c. discharges in the mixt. of Ne and Hg vapors were studied by the Langmuir method of probes. The character of luminescence of the mixt. along the pos. column of the discharge was examd. visually and with a spectrograph. The expts. were made on Hg-Ne mixts. at Hg pressures of about 10^{-4} mm. Hg and Ne pressures from 10^{-4} mg. Hg to 1 mm. Hg with discharge current intensities from 100 to 400 mA. The comparison of the results shows that with change in character of luminescence the electron temp. changes. The increase of the electron temp. at the anode in the sphere of the bright luminescence of Ne can be explained by its higher concn. in comparison to the cathode part of the discharge.

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Libacky

PAVLOV, B.V.; KOROLEV, G.V.

Kinetics of induced polymerization. Vysokom. soed. 1 no.6:869-877
Je '59. (MIRA 12:10)

1.Laboratoriya anizotropnykh struktur AN SSSR.
(Chemical reaction, Rate of) (Polymerization)

PAVLOV, B.V.

Kinetics of the mechanical destruction of polymers.
Vysokom.soed. 1 no.8:1227-1235 Ag '59. (MIRA 13:2)

1. Laboratoriya anizotropnykh struktur AN SSSR.
(Polymers--Strains and stresses)

KOROLEV, G.V.; PAVLOV, B.V.; HERLIN, A.A.

Thermometry as a method of studying polymerization kinetics.
Part 1: Principles of the method and the experimental setup.
Vysokom. soed. 1 no.9:1396-1402 S '59. (MIRA 13:3)

1. Laboratoriya anisotropnykh struktur AN SSSR.
(Polymerization) (Chemical apparatus)

S/076/60/034/05/03/038
B010/B002

5.3200

AUTHORS: Shantarovich, P. S., Pavlov, B. V.

TITLE: Thermal Cracking of Methane //

PERIODICAL: Zhurnal fizicheskoy khimii, 1960, Vol. 34, No. 5,
pp. 960-965

TEXT: The authors investigated the kinetics of the initial stage of thermal methane cracking at 1200-1400°C, a methane pressure of from 0.2 to 3.4 torr, and contact times in an interval of from 10^{-3} to 10^{-2} sec. Experiments were made in a helium current, and crackings were performed in small porcelain tubes (Tables 1-2, results) and small porcelain tubes coated with carbon black (Tables 3-6). Results show that a heterogeneous self-accelerated reaction takes place. The self-acceleration of the reaction is apparently caused by the decomposition of the methyl radical $\text{CH}_3 \rightarrow \text{CH}_2 + \text{H}$, which occurs on the surface. It is quite possible that the CH_2 radical reacts with CH_4 and does not

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PAVLOV, B.V.; GIBERT, A.I.

Logical device for determining the disrepair of tractor
hydraulic equipment. Nauch. trudy SibVIM no. 1:62-67 '63.
(MIRA 17:8)

KUDRYAVTSEVA, Yu.I.; PAVLOV, B.V.; VEDENEYEV, V.I.

Kinetics and mechanism of the thermal decomposition of ethane.
Zhur. fiz. khim. 38 no.4:978-980 Ap '64. (MIRA 17:6)

1. Akademiya nauk SSSR, Institut khimicheskoy fiziki.

NOTOV, B.V.

Some problems of the technical servicing of machines. Nauch.
trudy SibVIM no. 14-53 (1963). (MIRA 17:8)

PAVLOV, B. V.

"Correlation between the Conditioned Reflexes of the Various Alimentary Organs:

I. Effect of the Heart on the Conditioned Reflexes of the Alimentary System

in Dogs", Fiziol. Zhur. SSSR, 34, No 3, 1948. Physiol Inst. I.P. Pavlov, Acad.

Sci. -cl948-

CA

Action of phenamine on the higher nervous activity
in the dog. B. V. Pavlov (Pavlov Physiol. Inst., Acad.
Sci. U.S.S.R.) ~~Physiol. ZHIV.~~ ~~90, 271-82 (1950)~~ ~~Feeding~~ #3
0.025-0.5 mg./kg. phenamine 25-60 mins. before the
expts., in which noises, light, or touch stimuli were used
for investigation of reflex activity in dogs, showed that
0.05 mg. dosage gives optimum results in dogs with a weak
nervous organization, while max. doses are best for the
better organized animals. These doses gave significant
increase of conditioned salivary reflexes. The latent
period was shortened in all cases. Under the action of
the drug dogs which were normally restless in soundproof
boxes became quiet. Pulse rate usually rose, as did res-
piration. Frequent repetition of the drug eventually
led to sharp reflex decline and refusal of food. G. M. K.

PAVLOV, E. V.

"Conference of the Education Committees of the Pavlov Inst. of Physiology, the
Inst of Experimental Med., Acad. Sci. USSR and the Leningrad Society of
Physiologists, Biochemists and Pharmacologists,"
SO: Fiziol Zhur SSSR, in I.M. Sechenov, Vol 27, No 3, 1951

PAVLOV, B.V.

Methodological errors of L.A. Orbeli in evaluation of the role of the
sympathetic nervous system. Fiziol. zh, SSSR 38 no.1:13-26 Jan-Feb 52.
(CIAM 21:5)

1. Leningrad.

1. PAVLOV, B. V.
2. USSR 600
4. Physiology
7. Scientific conference dedicated to 103rd anniversary of I. P. Pavlov's birth, Fiziol. zhur, 38, No. 6, 1952.
9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

PAVLOV, B.V.; POVORINSKIY, Yu.A.

Interrelationship of the first and second signal systems in the somnambulant phase of hypnosis. First report. Zhur.vys.nerv.deiat. 3 no.3:381-392 My-Je '53.
(MLRA 6:9)

1. Laboratoriya fiziologii i patologii vysshey nervnoy deyatel'nosti Instituta fiziologii im. I.P.Pavlova Akademii nauk SSSR.
(Nervous system) (Hypnotism) (Somnambulism)

PAVLOV, B.V.

Results of work of the Leningrad Sechenov Society of Physiologists, Bio-
chemists and Pharmacologists for the past year. Fiziol.zhur. 39 no.4:525-
527 J1-Ag '53. (MLBA 6:8)
(Physiology--Societies) (Biochemistry--Societies) (Pharmacology--
Societies)

PAVLOV, B.V.

~~Session dedicated to the 104th anniversary of I.P. Pavlov's birth.~~
Pisoiol. smur. 39 no. 6: 759-761 M-D '53. (MLRA 6:12)
(Physiology)

B. V. PAVLOV

USSR/Medicine - Physiology

FD-944

Card 1/1 Pub. 33-27/29

Author : B. V. Pavlov

Title : ~~Concerning the work of the Leningrad Branch of the All-Union Society of Physiologists, Biochemists, and Pharmacologists during 1953~~
: Concerning the work of the Leningrad Branch of the All-Union Society of Physiologists, Biochemists, and Pharmacologists during 1953

Periodical : Fiziol. zhur. 40, 383-386, May/Jun 1954

Abstract : The activity of the Leningrad Society of physiologists, biochemists and pharmacologists, during 1953, ranged from discussion of physiological teachings of I. P. Pavlov to dissemination of political information. During 1953 the society held 52 meetings at which 134 scientific reports were read. The Society is divided into 5 sections: physiology, biochemistry, pharmacology and toxicology, labor physiology and physical education, and physiology of agricultural animals. The society is presently mobilizing all its resources to carry out the orders of the September Plenum of the Central Committee, CPSU, and the resolutions of the joint session of the Academy of Sciences USSR, and Academy of Medical Sciences USSR.

Institution : --

Submitted : --

USSR/Medicine - Neurophysiology, hypnosis

FD-2371

Card 1/1 Pub. 154-2/18

Author : Pavlov, B. V.; Povorinskiy, Yu. A.; and Bobkova, V. V. (Leningrad)

Title : On the question of interaction between the first and second signal systems during the somnambulistic phase of hypnosis. Report II.

Periodical : Zhur. vys. nerv. deyat., 5, 11-18, Jan/Feb 1955

Abstract : The aim of this report is to clarify some peculiarities of bioelectric activity of the brain (in healthy adults) during the somnambulistic phase of hypnosis in response to action of positive and inhibitive direct sound, light, and verbal stimuli. A limited focus of intensive excitation becomes formed in the second signal system during the somnambulistic phase of hypnosis. This arises as result of the simultaneous action of verbal and direct stimuli which are opposite in significance (one positive and one negative). These symptoms are connected, apparently, with the inductive inhibition of temporary connections in the first signal system. Five Soviet and six non-Soviet references. 11 diagrams.

Institution: --

Submitted : July 22, 1954

PAVLOV, B.V.

Brief results of the work of the Leningrad Sechenov Society of
Physiologists, Biochemists, and Pharmacologists during 1954.

Fiziol.zhur.41 no.4:590-592 J1-Ag '55. (MLRA 8:10)

(PHYSIOLOGY--SOCINIES) (BIOCHEMISTRY--SOCINIES)

(PHARMACOLOGY--SOCINIES)

PAVLOV, B. V.

"Changes Arising in the Higher Nervous Activity of Dogs Under the Influence of Irradiation by Roentgen Rays of the Cervical Section of the Vegetative Nervous System," by F. P. Mayorov, B. V. Pavlov, and N. Ya. Kibatova, Laboratory of Physiology and Pathology of Higher Nervous Activity (head, F. P. Mayorov), Trudy Instituta Fiziologii imeni I. P. Pavlov (Works of the Institute of Physiology imeni I. P. Pavlov), Moscow-Leningrad, Publishing House of the Academy of Sciences USSR, Vol 5, 1956, pp 79-102

Tests were conducted on five dogs in an effort to explain the influence of repeated irradiation by large doses of X rays (6,000 and 8,000 r) of the neck of: (1) intact dogs, (2) dogs with both superior cervical sympathetic ganglia removed, and (3) dogs with splanchnic nerves removed on both sides. The method used was that of salivary secretion.

Sum 1305

PAVLOV, B. K.

Results proved that irradiation of the neck by X rays at the site of the distribution of superior cervical sympathetic ganglia caused different changes in the higher nervous activity of intact and partially sympathectomized dogs. Thus: (1) In intact dogs there was a strong reduction in the value of conditioned and unconditioned reflexes, and these changes were of an irreversible nature for a long time. In certain cases hypnotic phases appeared which continued up to 3 weeks. (2) Irradiation by similar doses (6,000 and 8,000 r) of the neck of dogs who had undergone removal of the superior cervical sympathetic ganglia and those with severed splanchnic nerves caused in some cases a significant and prolonged rise of positive conditional reflexes and in others their fall.

Histological changes in internal organs are described.

Doc. 1315

USSR/Human and Animal Physiology - The Effect of Physical Factors. T
Ionizing Radiation.

Abs Jour : Ref Zhur Biol., No 3, 1959, 13401
Author : Lipatov, N.Ya., Mayorov, F.P., Pavlov, B.V.
Inst : Institute of Physiology, AS USSR
Title : Effect of Total Radiation by Roentgen Rays on Higher
Nervous Activity of Dogs.
Orig Pub : Tr. In-ta fiziol. AN SSSR, 1957, 6, 310-321
Abstract : Roentgen radiation by fractionated doses of 12.5 r
with a total dosage of 150 r and doses of 25, 50, and
100 r with the total dosage 300 and 600 r evoked chan-
ges in the HNA of dogs. After application of the same
dose to one dog the conditioned reflexes increased,
and only after a month and a half did they begin to
recede; in others a decrease of reflexes began at the

Card 1/2

- 159 -

PAVLOV, B.V.; VEDYAYEV, F.P.

Results of studies on problems in I.P. Pavlov's physiological teachings.
Zhur.vys.nerv.deiat. 7 no.2:318-324 My-Ap '57. (MIRA 10:9)
(PHYSIOLOGY)

PAVLOV, B.V.

Work of the Sechenov Society of Physiologists, Biochemists, and
Pharmacologists in Leningrad during 1956. *Fiziol.zhur.* 43 no. 4
385-387 Ap '57. (MIRA 10.10)
(PHYSIOLOGY) (BIOCHEMISTRY) (PHARMACOLOGY)

BIRYUKOV, Dmitriy Andreyevich, prof., otv. red.; VOYNO-YASENETSKIY, A.V., red.;
ZHUKOV, Ye.K., red.; KARANYAN, A.I., red.; KREPS, Ye.M., red.;
PAVLOV, B.V., red.; VEDYAYEV, P.P., red.; RULEVA, M.S., tekhn. red.

[Evolution of the functions of the nervous system] Evolutsiya
funktsii nervnoi sistemy. [Leningrad] Gos. izd-vo med. lit-ry,
Leningr. otd-nie, 1958. 287 p. (MIRA 11:12)

1. Chlen-korrespondent Akademii meditsinskikh nauk SSSR (for Biryukov).
(NERVOUS SYSTEM)

PAVLOV, B.Y.

Work of the Leningrad Sechenov Society of Physiologists, Biochemists,
and Pharmacologist in 1957. Fiziol.zhur. 44 no.8:789-790 Aug '58

(MIRA 11:9)

(LENNINGRAD--PHYSIOLOGY--SOCIETIES,

PAVLOV, B.V.

Stereotaxic apparatus and its use in experimental injuries
of subcortical formations; review of foreign literature.
Fiziol.zhur. 44 no.9:897-900 S'58 (MIRA 11:12)

1. Laboratoriya sravnitel'noy fiziologii vysshey nervnoy deyatel'nosti
Instituta fiziologii imeni I.P. Pavlova AN SSSR, Leningrad.

(BRAIN,

exper. subcortical lesions induced by stereotaxic
appar. review (Rus))

BARU, A.V.; BOLOTINA, O.P.; KRASUSKAYA, N.A.; LUKINA, Ye.V.; PAVLOV, B.V.;
PRAZDNIKOVA, N.V.; SAP'YANTS, V.I.; CHEBYKIN, D.A.

Material on a study of the dynamics of conditioned reflex activity
of representatives of certain classes of vertebrates. Trudy Inst.
fiziol. 8:99-106 '59. (MIRA 13:5)

1. Laboratoriya sravnitel'noy fiziologii vysshey nervnoy deyatel'-
nosti (zaveduyushchiy - B.V. Pavlov) Instituta fiziologii im. I.P.
Pavlova AN SSSR.

(NERVOUS SYSTEM--VERTEBRATES) (CONDITIONED RESPONSE)

BARU, A.V.; BOLOTINA, O.P.; PAVLOV, B.V.; PRAZDNIKOVA, N.V.; SAF'YANTS,
V.I.; CHEBYKIN, D.A.

Influence of alimentary excitability, and the size and quality of
alimentary reinforcement on the conditioned reflex activity of
representatives of some classes of vertebrates (fishes, birds,
and mammals). Trudy Inst. fiziol. 9:274-284 '60. (MIRA 14:3)

1. Laboratoriya sravnitel'noy fiziologii vysshey nervnoy deyatel'nosti
(zaveduyushchiy - B.V.Pavlov) Instituta fiziologii im. I.P.Pavlova.
(CONDITIONED RESPONSE) (NUTRITION)
(VERTEBRATES)

PAVLOV, B.V.

Nineteenth conference on problems of higher nervous activity.
Zhur. vys. nerv. deiat, 11 no.4:766-768 J1-Ag '61. (MIRA 15:2)
(NERVOUS SYSTEM)

S/026/62/000/005/001/010
DO36/D113

AUTHORS: Pavlov, B.V.; Povorinskiy, Yu. A.

TITLE: Along Pavlov's path

PERIODICAL: Priroda, no. 4, 1968, 25-33

TEXT: This very general article reviews present research into the higher nervous activity of man and animals. Specific breakthroughs or data collected during previous Soviet manned space flights are not mentioned. It is concluded that many problems of the higher nervous activity are still unsolved, above all the intimate nature of cortical excitation and inhibition, the mechanism and localization of the switching of temporary connections in the brain, the cortical-subcortical interrelations, and the regularities of the evolution of the higher nervous activity. A new approach is required for studying physiological processes on which the higher nervous activity and abstract thinking are based. Future manned space flights will help in studying factors affecting the state of the higher nervous activity

Card 1/2

Along Pavlov's path

S/026/62/000/005/001/010
D036/D113

of the cosmonaut, and in counteracting their harmful effects. There are 8 figures.

ASSOCIATION: Institut fiziologii im. I.P. Pavlova AN SSSR (Institute of Physiology im. I.P. Pavlov, AS USSR, Leningrad.

Card 2/2

KRASUSKAYA, N.A.; PAVLOV, B.V.

Characteristics of the inhibition of the delay in lower apes.
Trudy Inst. fiziol. 10:238-244 '62 (MIRA 17:3)

1. Laboratoriya sravnitel'noy fiziologii vysshey nervnoy de-
yatel'nosti (zav. - B.V. Pavlov) Instituta fiziologii imeni
Pavlova AN SSSR.

PAVLOV, B.V.; SAF'YANTS, V.I.

Delayed food conditioned reflexes in pigeons and canaries. Trudy
Inst. fiziol. 10:265-272 '62 (MIRA 17:3)

1. Laboratoriya sravnitel'noy fiziologii vysshey nervnoy deya-
tel'nosti (zav. - B.V.Pavlov) Instituta fiziologii imeni
Pavlova AN SSSR.

PAVLOV, B.V.; BARU, A.V.; BOLOTINA, O.P.; PRATENIKOVA, N.I.

Data on comparative physiology of trace conditioned reflexes.
Zhur. vys. nerv. deiat. 12 no.4:630-636 21-Ag 1968

(MIRA 10:11)

1. Laboratory of Comparative Physiology of Higher Nervous Activity, Pavlov Institute of Physiology, U.S.S.R. Academy of Sciences, Leningrad.

PAVLOV, Boris Vasil'yevich; VINETSKIY, Yu.P., nauchnyy red.; SHUSTOVA,
I.B., red.; RAKITIN, I.T., tekhn. red.

[What are biopolymers] Chto takoe biopolimery. Moskva, Izd-vo
"Znanie," 1963. 55 p. (Narodnyi universitet kul'tury: Estestvennonauchnyi fakul'tet, no. 3) (MIRA 16:5)
(POLYMERS) (BIOCHEMISTRY)

PAVLOV, B.V.

"Problems of the comparative physiology of analyzers." no.1.

Reviewed by B.V. Pavlov. Vest.LGU 18 no.3:154-155 '63.

(MIRA 16:2)

(SENSE ORGANS)

L 10088-67 EWP(o)/EWT(m)/EWP(t)/ETI IJP(c) JD/WH
ACC NR: AP5023368 SOURCE CODE: UA/0237/66/000/007/0048/0050 44

AUTHOR: Kolomiets, B.T.; Pavlov, B. V.

ORG: none

TITLE: Optical absorption of As_2SO_3 made of initial materials of different purity
27-27

SOURCE: Optiko-mekhanicheskaya promyshlennost', no. 7, 1966, 48-50

TOPIC TAGS: glass property, arsonic compound, selenido, oxygen, absorption spectrum, light absorption, chemical purity

ABSTRACT: In view of the influence of the purity of the initial materials on the character of the absorption spectra of various glasses, the authors investigated the absorption of glass-like As_2SO_3 in the spectral region $2 - 18 \mu$ at different purity of the initial material and under different synthesis conditions, for the purpose of separating the intrinsic absorption bands of the material from the bands due to various contaminations. The synthesis was carried by procedures described earlier (ZhTF v. 28, 1958, no. 5, 981). The measurements were with a double-beam infrared spectrophotometer (IKS-14) operating in the $0.8 - 18 \mu$ range. The

Card 1/2

UDC: 666.11.01:535.34-1

PAVLOV, B.V.

Upper limit of self-ignition in an unbranched chain reaction.
Dokl. AN SSSR 162 no.4:873-874 Je '65. (MIRA 12-65)

1. Institut khimicheskoy fiziki AN SSSR. Submitted November 28,
1964.

PAVLOV, B.V.

Put cybernetics at the service of agriculture. Mekh. i elek.
sots. sel'khoz. 21 no.3:9,25 '63. (MIRA 16:8)

1. Direktor Sibirskogo filiala Vsesoyuznogo nauchno-issledovatel'-
skogo instituta mekhanizatsii sel'skogo khozyaystva.
(Electronic data processing—Agriculture)
(Electronics in agriculture)

PAVLOV, B. YA.

Clover

Maintain and increase clover sowing in northwestern districts of Khar'kov province Sel.
i sem 19 No. 3, 1952.

9. Monthly List of Russian Accessions, Library of Congress, June 1952 Uncl.

PAVLOV, B. YE.

Alfalfa

Maintain and increase clover sowing in northwestern districts of Khar'kov province. Sel.
i sem. 19, No. 3, 1952.

9. Monthly List of Russian Accessions, Library of Congress, June 1952, ~~20~~ Uncl.

L 21285-66 EWT(1)/T WR
 ACC NR: AT6004853 SOURCE CODE: UR/2563/65/000/255/0067/0069
 AUTHOR: Yesepkina, N. A.; Pavlov, B. Ya.; Patrun'kin, V. Yu.
 ORG: none
 TITLE: Strip power dividers
 SOURCE: Leningrad, Politekhnikheskiy institut. Trudy, no. 255,
 1965. Radioelektronika (Radio electronics), 67-69
 TOPIC TAGS: power divider, strip transmission line, microstrip
 ABSTRACT: Strip-type exponential power dividers intended for supplying
 r-f power to multielement antennas are briefly described. Ratios l/λ
 for various w_2/w_1 and TW ratios are tabulated; here l is the exponen-
 tial-conductor length, λ is the wavelength, w_2 and w_1 are the
 terminal impedances of the divider. Curves of amplitude distribution
 over the output cables and of TW ratio within 500—700 Mc are presented.
 The above divider has been for division ratios up to 20. For higher
 ratios, a combination of ten strip exponential dividers arranged
 circularly and a strip (or coaxial) transformer is suggested. Orig.
 art. has: 4 figures, 1 formula, and 1 table. [03]
 SUB CODE: 09/ SUBM DATE: none/ OTH REF: 002/ ATD PRESS: 4/8
 Cord 1/1 dha

AUTHORS:

Pavlov, D., Lazarev, D.

SOV/78-3-9-15/38

TITLE:

Polarographic Investigation of the Complex Compounds of Trivalent Antimony in Solutions of Sodium Fluoride (Polarograficheskoye issledovaniye kompleksnykh soyedineniy trekhvalentnoy sur'my v rastvorakh fluoristogo natriya)

PERIODICAL:

Zhurnal neorganicheskoy khimii, 1958, Vol 3, Nr 9, pp 2099-2108 (USSR)

ABSTRACT:

The complex compounds of trivalent antimony in solutions of sodium fluoride were investigated polarographically. For the purpose of determining the character, the type and the behaviour of the obtained antimony complexes in solutions of sodium fluoride, similar investigations were carried out according to two methods. The dependence of the potential step $E_{1/2}$ on the pH-value of the solution was investigated at a constant concentration of the fluorine-ion; at constant pH-value of the solution the modification of the potential step in dependence on the concentration of the fluorine-ion was investigated. The results showed that in acid medium antimony with fluorine ion forms the stable complex $[SbF_6]^{3-}$ with the stability constant

Card 1/3

SOV/78-3-9-15/38

Polarographic Investigation of the Complex Compounds of Trivalent Antimony
in Solutions of Sodium Fluoride

$K_c = 10^{-36}$. The potential step of the antimony complex is obtained in the potential range of from -300 to -900 mV. In the neutral and weakly alkaline medium the antimony-fluorine complex hydrolyzes gradually under the formation of unstable oxy-complexes, which probably have the following composition: $[Sb(OH_2)_{p-1}(OH)]^{2+}$, $[Sb(OH_2)_{p-2}(OH)_2]^+$ and $[Sb(OH_2)_{p-3}(OH)_3]$. The final product of the hydrolysis of the antimony-fluorine complex is a deposit of $Sb(OH)_3$. The polarographic waves of the oxy-complexes of antimony by no means can be used for analytical purposes. In highly alkaline medium a dissolution of $Sb(OH)_3$ occurs with the formation of the salt of the meta-antimonous acid at the same time. This salt has a cathode step $E_{1/2} = -1,270$ V and an anode step $E_{1/2} = 0,355$ V. The solutions obtained of the antimony-fluorine complex in a highly alkaline solution of sodium fluoride are used for quantitative analyses. The mechanism of hydrolysis of the complex $[SbF_6]^{3-}$ was

Card 2/3

SOV/78-3-9-15/38

Polarographic Investigation of the Complex Compounds of Trivalent Antimony
in Solutions of Sodium Fluoride

discussed for the ranges of pH 6-8, and for the highly acid
range of pH 11-13.

There are 9 figures, 3 tables, and 5 references, 1 of which
is Soviet.

ASSOCIATION: Khimiko-tehnologicheskii institut - Bolgariya (Chemical and
Technological Institute - Bulgaria)

SUBMITTED: June 11, 1957

Card 3/3

38137. PAVLOV, D.

Uskorennyy posol svinykh okorokov cherez krovenosnuyu sistemu.
Myas. industriya SSSR, 1949, No 6, s. 32-35.

PAVLOV, D.

"On the absorption of hydrogen arsenide from potassium iodate and its utilization for polarographic determination of arsenide."

IZVESTIIA, Sofia, Bulgaria, Vol. 6, 1958.

Monthly List of East European Accessions Index (EEAI), The Library of Congress, Volume 8, No. 8, August 1959.

Unclassified

PAVLOV, D.

BULGARIA / Chemical Technology, Chemical Products and Their
Applications: Fermentation Industry.

H-27

Abs Jour : Ref Zhur - Khimiya, No 5, 1959, No. 17244

Author : Pavlov, D.

Inst : Not given

Title : Removal Methods of the Freely-Draining Must and Pressing
Methods used in Wine Making

Orig Pub : Lozarstvo i vinarstvo, 1958, 7, No 4, 25-33

Abstract : Due to the fact that pressing operation is not used in
the wine making in NRB, the yield of must is only 62.5%.
It is proposed to employ pressing equipment at all of
the plant, that should increase the yield up to 70% and
will result in a more economical operation. Schemes
proposed for the refining of white grapes is: pump -
rotational type draining basket - continuous press; that
for the refining of red wines is the same as above except

Card 1/2

PAVLOV, D.

BULGARIA/Chemical Technology - Chemical Products and Their
Application. Fermentation Industry.

I-12

Abs Jour : Ref Zhur - Khimiya, No 1, 1958, 2868

Author : Stefanova, M., Pavlov, D., Burdzhiev, Iv.

Inst : -

Title : Production of Wine of the Sherry Type in Bulgaria

Orig Pub : Lozarstvo i vinarstvo, 1957, 6, No 1, 22-29

Abstract : A study was made, under laboratory conditions, of the suitability of 4 varieties of Bulgarian grapes for the production of sherry wine. Best suited are Fetyaska and Bereza; Pamid gave somewhat less satisfactory results, while the gymza variety is not suitable for the making of sherry. In studying the effect of nitrogen-containing substances on development of sherry characteristics it was ascertained that yeast water, 0.5-1%, and ammonia (80 mg/liter) contribute to their development, especially on combined addition. Analyses show that this causes an increased content of

Card 1/2

Country : BULGARIA
Category: Analytical Chemistry. Analysis of Inorganic Substances

Abs Jour: RZhKhim., No 17, 1959, No. 60545

Author : Lazarov, D.; Pavlov, D.

Inst : -

Title : Utilization of the Antimony Fluoride Complex
In the Analysis

Orig Pub: Khimiya i Industriya (Bulg.), 1958, 30, No 6,
166-169

Abstract: A possibility of polarographic determination of Sb in the SbF_6^{3-} form in the presence of Pb^{2+} , Cu^{2+} , and Bi^{3+} has been demonstrated. The Sb_6^{3-} ion is stable in the pH range of 2.5-6.0. To 10 ml of the acetate buffer solution are added

Card : 1/3

E-20

Country : BULGARIA
 Category: Analytical Chemistry. Analysis of Inorganic Substances

E

Abs Jour: RZhKhim., No 17, 1959, No. 60545

4 ml of 0.5 M NaF and the analyzed acidic (2n.) solution of SbCl_3 (0.02n.), followed by neutralization with a 2n. NaOH solution, introduction of 0.5 ml of 0.5% gelatin solution, dilution with water up to 20 ml, and polarographing at -0.4 and 1.0 v. in the presence of H_2 . In the presence of Pb^{2+} or Bi^{3+} the polarographic analysis is conducted at a pH of 3.5 - 6.0. Under these conditions the precipitation of PbF_2 and of basic Bi-salt occurs. Pb may be determined by a separate test at 13 pH. In the presence of Cu^{2+} , antimony is polarographed at 4-5 pH; Cu^{2+} does not interfere with the determination of Sb^{3+} although,

Card : 2/3

PAVLOV, D.; LAZAROV, D.

Polarographic analysis of trivalent antimony complexes in sodium fluoride solutions. Zhur. neorg. khim. 3 no.9:2099-2108 S '58.
(MIRA 11:10)

1. Khimiko-tekhnologicheskii institut, Bolgariya.
(Antimony compounds) (Sodium fluoride)
(Polarography)

CHRISTOV, S. [Khristov, S.]; PANGAROV, N.; PAVLOV, D.

Overvoltage of hydrogen in cubic cobalt. Doklady BAN 15 no.5:511-514 '62.

Pavlov D

AUTHORS: Pavlov, D., and Lazarov, D.

20-1-29/58

TITLE: A Polarographic Investigation of the Complexes of Trivalent Antimony in Sodium-Fluoride Solutions. (Polyarograficheskoye issledovaniye kompleksov trekhvalentnoy sur'my v rastvorakh ftoristogo natriya).

PERIODICAL: Doklady AN SSSR, 1958, Vol. 118, Nr 1, pp. 103-106(USSR).

ABSTRACT: The authors give the polarographic characteristic of antimony in fluoride solutions according to reference 1. They made the present investigation in view of this information and in connection with the fact that the fluorine ion possesses a small radius and forms stable complexes with several ions. The investigations were in parallel performed with 2 methods: 1) the dependence of the variation of $\pi_{1/2}$ on the pH of the solution was studied at a constant total concentration of F^- ; 2) the dependence of the variation of $\pi_{1/3}$ on the F^- -concentration was studied at a constant pH. Both test series showed that the Sb^{+++} are in different manners bound in the complexes in the entire range of pH-values from 1 to 14. At pH-values of 1 to 3 the Sb^{+++} are free; at pH from 3 to 6 a fluorine complex develops which decomposes in the pH-range of from 6 to 8. The complexes forming above pH 8 do not contain any F^- ; at pH 13 an anode- and a cathode-wave become

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A Polarographic Investigation of the Complexes of Trivalent Antimony in Sodium-Fluoride Solutions. 20-1-29/58

visible on the polarogram. Based on these studies the authors divided the entire range of pH-values into 3 parts: Sb^{+++} -complexes in acid NaF-solutions. Results of some test series are given in coordinates $\pi_{1/2}$, pH on figure 1. An equation for the total concentration of fluorine ions is derived. Figure 2 records the dependence of $\pi_{1/2}$ on $-lg a_F$. An equation for the straight (figure 2) is given. The constant of instability $K_c = 10^{36}$ ("konstanta nestoykosti"). The complex of the type $[SbF_6]^-$ is only stable until the ratio $a_{OH^-} / a_F = 10^{-8}$, i. e. until the peak of the curves $\pi_{1/2}$, pH, (figure 1). Sb^{+++} -complexes in the medium alkaline range. This range begins with the disintegration of the SbF_6^- -complex and ends in the alkaline range (up to pH 11-12). In this range several complexes develop in an unstable form. The pH-values in the range 5-8 yielded no unique results for $\pi_{1/2}$, but a low point of these curves (figure 1) was in all cases observed. In the pH-range of from 8 to 11 two waves are noticed: the groundwave II and the preliminary wave I (figure 3). The preliminary wave disappears when the solution is heated or left standing.

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It is independent on the F^- concentration and is in pH-modifications displaced toward the more negative values according to the equation $\pi_{1/2} = 1,100 - 0,060 \lg a_{OH^-}$ (figure 4, I). The tests showed that F^- , Cl^- and NH_3 do not participate in the complex. Thus a hydroxycomplex

$[Sb(OH_2)_3(OH)_3]^{++}$ may be assumed which on standing splits off water and precipitates $Sb(OH)_3$. Its constant of instability $K_c = 2,7 \cdot 10^{-14}$.

The main wave also loses in height, but much slower. In this connection the pH of the solutions also changes. $\pi_{1/2}$ is independent on the concentration of F^- , Cl^- and NH_3 and shifts toward more negative values according to the equation: $\pi_{1/2} = -1,50 - 0,020 \lg a_{OH^-}$ (figure 4, II).

From this the following complex may be assumed:

$[Sb(OH_2)_3(OH)_3]^{++}$, $K_c = 10^{-16}$. Behavior of Sb^{+++} in strongly alkaline media.

This range begins with the dissolution of the precipitation $Sb(OH)_3$. In strongly alkaline solutions with pH 14 a well marked

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cathode-wave develops when $\pi_{1/2} = -1,270$ v and an anode-wave when

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in Sodium-Fluoride Solutions.

$\pi_{1/2} = -0,355$ v. The latter is deformed by a peculiar maximum. The height ratio of the two waves is 3 : 2 (figure 3). Conversion mechanism of individual complex Sb^{+++} forms at variations of the pH of the solution. In a strongly acid medium (up to pH 2.3) the F⁻ ions are bound as HF and HF₂, whereas Sb^{+++} are free. The activity of F⁻ increases with increasing pH and conditions for the formation of $[SbF_6]^{-}$ are created. Its hydrolysis (see above) leads to the formation of an unstable complex $[Sb(OH_2)_5(OH)]^{++}$ which decomposes. The hydro- and hydroxy-complexes are unstable and may be considered intermediate forms of the hydrolysis of $[SbF_6]^{-}$. There are 4 figures, and 4 references, 1 of which is Slavic.

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Institute of Microbiology, Leningrad, 191011, USSR (L. L. LITVIN and
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Microbial and Genetic Control of Degradation of Carbohydrates in Food
and Feed. Microbial Technology.

1977, Microbiology, Vol. 1, No. 1, 1977, pp. 1-2.

Abstract. In this article, a description of the structure of the
carbohydrate polymer degradation system is given. The authors
conclude that the system is a complex.

PAVLOV, D.; PRODANOV, K.

A quick and specific method for the determination of glucose
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(BLOOD SUGAR) (GLUCOSE)

COUNTRY : Bulgaria
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APR. JOUR. : RZKhim., No. 1959, No. 86153

AUTHOR : Pavlov, D.; Yelenkova, N.
INST. : Chemical Institute, Bulgarian Academy of Sciences
TITLE : Absorption of Arsine by Potassium Iodate
Solution and Its Use in Polarographic
Determination of Arsenic.

ORIG. PUB. : Izv. Khim. in-t. Bulg. AN, 1958, 6, 33-43

ABSTRACT : A method has been developed for determination of As, based on reduction of As to AsH₃, absorption of AsH₃ by standard solution of KIO₃, and polarography of unreacted IO₃. The sample is treated with a current of H₂ (Zn in 30% H₂SO₄). The evolved AsH₃ is absorbed in 20 ml of a mixture having the composition: 2 N H₂SO₄, 0.00755 N KIO₃ and 0.00037 M Ce(SO₄)₂; completeness of absorption is checked with 10% ammoniacal solution of AgNO₃ (duration of absorption 30-40 minutes). Ce(SO₄)₂ catalyzes the reaction $2\text{HIO}_3 + 5\text{AsH}_3 = 5\text{H}_3\text{AsO}_4 + 4\text{I}_2 + 4\text{H}_2\text{O}$; at the same time there takes place in the system the reaction: $2\text{I}_2 + \text{IO}_3 + 6\text{H}^+ = 6\text{I}^+ + 3\text{H}_2\text{O}$, and it is proposed to add to absorption mixture, as

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